U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-110-2010-0115-EA

CASEFILE/PROJECT NUMBER: Lease - COD-052141
PWDD line – COC74420
Freshwater line – COC74611

PROJECT NAME: ExxonMobil Piceance Creek Unit (PCU) 296-18A1-A10, PCU 296-18D1-D22 and PCU 296-6C1-C10

LEGAL DESCRIPTION: Sixth Principal Meridian, Colorado
T.2 S., R.96W.,
Sec. 18, lots 7, 9, 10, 15, 16.

T. 2 S., R. 96 W., Sec. 18 (PCU 296-18A1-A10)
T. 2 S., R. 96 W., Sec. 18 (PCU 296-18D1-D22)
T. 2 S., R. 96 W., Sec. 6 (PCU 296-6C1-C10)

APPLICANT: ExxonMobil Oil Corporation

ISSUES AND CONCERNS (optional): All identified issues have been resolved.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: The proposed locations were submitted for review by early notification during the fall of 2009. Consequently, these locations were on-sited on 11/09/09, and APD's for these locations were received on 03/04/10.

Proposed Action: The proposed action includes constructing three well pads and drilling ten natural gas wells on well pad PCU 296-18A, twenty natural gas wells on well pad PCU 296-18D, and ten natural gas wells on well pad PCU 296-6C (see Table 1 for pad dimensions and total area disturbed). The proposal also includes a request to construct 400 feet (0.37 acres) of access road to access location PCU 296-18A, 520 feet (0.5 acres) of access road to access location PCU 296-18D, and 570 feet (0.52 acres) of new access road to access location PCU 296-6C. The proposed action also includes a proposal to install gas gathering lines that would transport gas from each proposed well (see map for proposed pipeline route). The applicant would install 300 feet of gathering pipeline for location PCU 296-18A, 1,700 feet of gathering pipeline for location PCU

296-18D, and 600 feet of gathering pipeline for location PCU 296-6C. The proposed pipeline corridor width is 50 feet for each gathering line, and the existing roads would be used as the working surface. The applicant proposes to disturb approximately 39.6 acres of Bureau of Land Management (BLM) managed lands as a result of building the proposed natural gas well pads, constructing the access roads to access the wells associated with the pads, and clearing the gathering line corridors. For a summary of proposed feature dimensions, see Table 1 (attached). See Figure 1 for a map of the project area and all proposed features associated with the proposed action.

An additional SF299 application was received 5/28/2010 requesting a right-of-way authorization for a 4-inch surface fresh water pipelines to connect the PCU 296-18A and PCU 296-18D wells to an existing water storage facility on the PCU 296-23-18 location. The polypropylene pipelines would be laid from spools within the disturbed areas of the proposed gas and produced water routes and the well pads immediately prior to the start of drilling. The line would be left in place only as long as active drilling is progressing. Exxon has committed to blocking under the line where it crosses drainage areas. After the lines are removed, Exxon would perform reclamation (including seeding) on any areas disturbed by the movement of the surface lines or in the removal process. Exxon would place signage clearly labeling the line as freshwater. Their experience with this type of pipe indicates that using it in ambient-to freezing temperatures resulting in movement of side to side 'snaking,' is limited to around a foot laterally. The line will be primarily "free draining" and they will also "blow out" the line with compressed air when not in use to prevent freeze/ plugging.

Authorization of the freshwater surface lines would be by a short term (3-year) right-of-way, 20 feet wide and 2,700 feet long for these two wells, resulting in an encumbrance of 1.24 acres. No additional surface disturbance would be required. If drilling or reclamation takes place beyond the 3 year period, the right-of-way could be renewed for the necessary location.

No Action Alternative: Under the no action alternative this proposal would not be approved, the access road to the location would not be built, the pipelines would not be installed, the well pad would not be constructed and the 40 wells would not be drilled.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None

NEED FOR THE ACTION: The purpose of the proposed action is to manage the exploration and development of mineral resources on Public Lands in a manner that avoids, minimizes, reduces, or mitigates potential impacts to other resource values.

PLAN CONFORMANCE REVIEW: The proposed action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5; BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP) (USDI BLM 1997)

Date Approved: July 1, 1997

Decision Number/Page: Pages 2-5 through 2-6

Decision Language: "Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values."

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

NATURAL, BIOLOGICAL, AND CULTURAL RESOURCES

AIR QUALITY

Affected Environment: The proposed action is located in rural northwest Colorado in the White River Basin, more than ten miles from special designation air sheds or non-attainment areas. Industrial facilities in White River Basin include coal mines, soda ash mines, natural gas processing plants and power plants. Due to these industrial uses, increased population and oil and gas development, emissions of air pollutants in the White River Basin due to exhaust and dust are likely to increase into the future. Despite increases in emissions, overall air quality conditions in the White River Basin are likely to continue to be good for some time due to effective atmospheric dispersion conditions and limited transport of air pollutants from outside the area.

Although specific air quality monitoring data are not available for the project area, data have been collected in the region. BLM recently established two air quality monitoring sites, one in Rangely and one in Meeker, that measure criteria pollutants, specifically ozone, dust and nitrogen oxides. The cities of Grand Junction (southwest), Steamboat Springs (northeast), Rifle (southeast) and Parachute (south) all host air quality monitoring stations. Available monitoring data at these stations indicate that the area is likely to be in the attainment category, meaning that the ambient concentrations of criteria pollutants are less than the applicable air quality standards (National Ambient Air Quality Standards and (NAAQS) and Colorado Ambient Air Quality Standards (CAAQS)). However it should be noted, not all criteria pollutants have been monitored at each station and there is not continuous monitoring of all criteria pollutants at any of the stations. Also, differences in the atmospheric conditions, proximity to emissions, and climate at any of these monitoring sites can make data from these sites less relevant to the project's location.

The White River Basin and the nearby portions of the Colorado River Basin has been classified as either attainment or unclassified for all air pollutants (NAAQS and CAAQS standards), and

most of the area has been designated for the prevention of significant deterioration (PSD) Class II. Because the historic air quality in the White River Basin has been good, small changes in air quality may have noticeable localized effects, especially on visibility.

Environmental Consequences of the Proposed Action: The proposed action includes building 3 well pads, drilling 40 wells, installation of pipelines, one surface line for freshwater and the construction of the access roads.

Construction of well pads involves removing top soil, constructing pads using cut and fill techniques, and installing storm-water BMPs. Building new access roads involves stripping the topsoil and windrowing it to the side, digging the barrow ditches and shaping the road crown, replacing the topsoil on cut/fill slopes and barrow ditches, and reclamation/stormwater control efforts. During these construction phases dust production is likely, especially when conditions are dry and/or windy. Once the wells go into interim reclamation all the roads should have the topsoil redistributed and stabilized and the pad should be recontoured and stabilized.

As vegetation establishes in the reclaimed areas, the only dust production that is likely is due to vehicles traveling on the access road and pads to service the wells. Therefore, dust production is most likely during drilling and construction activities. With maintaining roads to BLM Manual Section 9113 standards, as specified by the operator and, and with the application of dust suppressants, dust generation should be reduced, but will still occur on access roads during production and be more pronounced during dry and windy conditions. The applicant has indicated that they will use water as a dust suppressant as needed.

Soil disturbance resulting from construction, heavy equipment, and drill rigs is expected to cause increases in fugitive dust and inhalable particulate matter, specifically PM_{10} and $PM_{2.5}$, in the project area and immediate vicinity. In addition, increases in the following criteria pollutants: carbon monoxide, ozone (secondary pollutant), nitrogen dioxide, and sulfur dioxide would also occur due to combustion of fossil fuels during installation activities. Non-criteria pollutants such as visibility, nitric oxide, air toxics (e.g. benzene) and total suspended particulates (TSP) may also experience slight, temporary increases as a result of the proposed action (no national ambient air quality standards have been set for non-criteria pollutants). Additional low, short-term impacts to air quality may occur due to venting of gas from the wells. Even with these increased pollutants, this project is unlikely to result in an exceedance of NAAQ and CAAQ standards and is likely to be under PSD thresholds.

Environmental Consequences of the No Action Alternative: No impacts would occur.

Mitigation:

1. All access roads will be treated with water and/or a chemical dust suppressant during construction and drilling activities so that there is not a visible dust trail behind vehicles. All vehicles will abide by company or public speed restrictions during all activities. If water is used as a dust suppressant, there should be no traces of oil or solvents in the water and it should be properly permitted for this use by the State of Colorado. Only water needed for abating dust should be applied.

SOILS

Affected Environment: The proposed action does not impact soils identified as fragile, with landslide potential and/or steep slopes. According to 10 meter Digital Elevation Model data there is a small portion of the 296-18A pad that will be on slopes greater than 25%. This pad has been altered in shape to minimize the impact on these steeper slopes. The soil classifications of the soils that will be impacted by new construction for the pads, roads and pipelines are shown in the table below.

Soil Classifications (acres potentially impacted based on a 30m buffer)

Soil Classification	Range Site Description	Acres
Piceance fine sandy loam, 5-15% slopes	Rolling Loam	9
Yamac Loam, 2-15% slope	Rolling Loam	11
Veatch channery loam, 12-50% slopes	Loamy Slopes	14
Castner channery loam, 5-50% slopes	Pinyon-Juniper woodlands	31

The soils for the 296-18A and 296-18D are Castner and Veatch channery loam soils. These soils have a moderate to very high hazard for erosion and medium to rapid surface runoff. The Rentsac channery loam soils have sandstone crock fragments mixed in with soils near the surface. Pad 296-6C has Piceance fine sandy loam and Yamac loam soils. These soils have slow to medium runoff and a slight to high erosion hazard.

Environmental Consequences of the Proposed Action: Potential impacts to soils from the proposed action include removal of vegetation, mixing of soil horizons, soil compaction, increased susceptibility to erosion, loss of topsoil productivity and contamination of soils with petroleum constituents. If reclamation is successful and spills are contained and cleaned up, impacts from this project will be minor and localized to disturbed areas. Impacts could become severe if drilling and construction activities continue when soils are saturated or erosion resulting from the project continues without being addressed by Best Management Practices (BMPs).

The construction of the access roads, pipeline installation and construction the well pads would result in the loss of vegetative cover, increasing the potential for water erosion and soil loss during excavation. Compaction due to construction activities would reduce aeration, permeability and water-holding capacities of the soils. An increase in surface run-off could be expected from these areas, potentially causing increased sheet, rill and gully erosion. Decreased soil productivity as a result of the loss of topsoil has the potential to hinder revegetation efforts and leave soils further exposed to erosional processes. In addition, grading, trenching, and backfilling activities may cause mixing of the soil horizons, which could diminish soil fertility, reducing the potential for successful revegetation. In addition, the segregation and reapplication of surface soils would result in the mixing of shallow soil horizons, resulting in a blending of soil characteristics and types. This blending would modify physical characteristics of the soils, including structure, texture and rock content, which could lead to reduced permeability and increased runoff from these areas.

The primary effect of surface disturbances on soil resources is in increasing erosion. Increased erosion of soils would also directly reduce vegetative productivity. Erosion potential for the soil types that would be disturbed in the project area ranges from slight to very high. If the seedbed is not stabilized, revegetation efforts will not be successful and erosion could become substantial.

Contamination of surface and subsurface soils can occur from leaks or spills of oil, produced water, and condensate liquids from wellheads, produced water sumps and condensate storage tanks. Leaks or spills of drilling and hydraulic fracturing chemicals, fuels and lubricants could also result in soil contamination. Such leaks or spills could compromise the productivity of the affected soils. Of these materials, leaks or spills of condensate would have the greatest potential environmental impact. Depending on the size and type of spill, the impact to soils would primarily consist of the loss of soil productivity. Typically, contaminated soils would be removed and disposed of in a permitted facility or would be bio-remediated in place using techniques such as excavating and mulching to increase biotic activities that would break down petrochemicals into inert and/or common organic compounds.

This project includes a 2,700 foot short-term surface water line that would likely disturb vegetation and soils during the proposed 3 years of use. This surface line would be placed along existing disturbance and therefore may reduce the success of reclamation of these areas.

Environmental Consequences of the No Action Alternative: No impacts to soils would likely occur.

Mitigation:

1. All construction and drilling activity shall cease when soils or road surfaces become saturated to a depth of three inches unless there are safety concerns or if activities are otherwise approved by the Authorized Officer (AO).

2. In order to protect rangeland health standards for soils, erosion features such as riling, gullying, piping and mass wasting on the surface disturbance or adjacent to the surface disturbance as a result of this action will be addressed immediately after observation by contacting the AO and submitting a plan to assure successful soil stabilization with BMPs to address erosion problems.

Finding on the Public Land Health Standard for upland soils: With mitigation this action is unlikely to reduce the productivity of soils impacted by surface disturbing activities, thus land health standards are likely to be met.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored, or disposed of at sites included in the project area. The operator does not identify in their APD submissions any hazardous substances to be used during operations associated with this project.

Most of the exploration and production wastes generated during the proposed action would be exempt from the Resource Conservation and Recovery Act (RCRA) hazardous waste regulations (e.g., produced water, produced oil) due to the exception for oil and gas exploration and development activities. However, the exemption does not mean that these wastes present no hazard to human health and the environment, nor would the exemption relieve the operator from corrective action to address releases of exempt wastes. Non-exempt wastes such as lubricants, fuels, caustics or acids, and other chemicals would be used during exploration and production activities and solid waste (e.g., human waste, garbage, etc.) would be generated during the proposed activities. The operator has not specified the chemicals that would be used for drilling, completion, and hydraulic fracturing. Potential environmental impacts from these hydraulic fracturing agents are not well known.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used, and transported in a manner consistent with applicable laws such that generation of hazardous wastes is not anticipated. All left-over chemicals and materials would be hauled off-site for use or disposal. Solid wastes would be properly disposed of off-site at an approved facility.

Accidental releases associated with equipment failures, equipment maintenance and refueling, and storage of fuel, oil, other fluids, and chemicals could cause soil, surface water, and/or groundwater contamination. Improper management of pit contents may also contribute to environmental contamination. Releases of produced water would present widespread impacts. The high salinity of produced water may affect plant growth due to the high osmotic pressure of the soil solution, and impact groundwater or surface water through leaching or run-off. The sodicity (i.e., excess sodium) of produced water causes deterioration of the soil structure, thereby increasing the potential for soil erosion. Leaks of produced water, condensate, and/or natural gas present potential for chronic exposure of potentially hazardous chemical to proximate plants, wildlife, livestock, or people if the fluids encounter ground or surface water. With implementation of the mitigation measures and the Spill Prevention, Control, and Countermeasure (SPCC) Plan described below, impacts would likely be temporary.

Since chemicals that would be used on the site have not been disclosed (specifically chemicals or other additives used for drilling, completion and hydraulic fracturing operations), impacts of unknown severity may occur to groundwater. With proper well completion, impacts between aquifers of varying water quality could potentially occur, but is unlikely due to the vertical displacement of freshwater and the production zones.

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated under the no action alternative.

Mitigation:

1. Comply with all Federal, State and/or local laws, rules, and regulations, including but not limited to onshore orders and notices to lessees, addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment.

2. Employ, maintain, and periodically update to the best available technology(s) aimed at reducing emissions, fresh water use and hazardous material utilization, production and releases through all phases of oil and gas exploration, development, and production.

3. When drilling to set the surface casing, drilling fluid will be composed of fresh water, bentonite and/or a benign lost circulation material – that is a **lost circulation material that does not pose a risk of harm to human health or the environment**, (i.e., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs or cotton hulls).

4. All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.

5. The operator shall submit an updated Spill Prevention Control and Countermeasures Plan and an updated spill/release contingency plan to the BLM White River Field Office prior to engaging in construction activities.

6. Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

7. In addition to compliance with the reporting requirements of Notice to Lessee's-#3A and regardless of a substance's status as exempt or non-exempt, report all emissions or releases of any quantity of any substance that may pose a risk of harm to human health or the environment to the BLM White River Field Office at (970) 878-3800.

8. Regardless of a substance's status as exempt or non-exempt and regardless of fault, provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment. Where the lessee/operator fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM White River Field Office may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action shall not relieve the lessee/operator of any liability or responsibility.

9. With the acceptance of this authorization or the running of thirty calendar days from its issuance, whichever occurs first, and during oil and gas exploration, development and production under this authorization, the lessee/operator, and through the lessee/operator, its agents, employees, subcontractors, successors and assigns, stipulates and agrees to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk of harm to human health or the environment.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: Surface Water: This project is located in the Piceance Creek drainage. The following water segments may be impacted by this project:

Water Quality Classification Table*

		Protected Beneficial Uses		
Segment	**Segment Name**	**Aquatic Life**	**Recreation**	**Agriculture**
15	Mainstem of Piceance Creek from a point just below the confluence with Ryan Gulch to the confluence with the White River	Warm 2	Primary Recreation	Yes
16	All tributaries to Piceance Creek, including all wetlands, from the source to the confluence with the White River.	Warm 2	Primary Recreation	Yes

***** Colorado Department Of Public Health And Environment, Water Quality Control Commission, Regulation No. 37 Classifications and Numeric Standards For Lower Colorado River Basin, Effective June 30, 2010

The mainstem of Piceance Creek and tributaries to Piceance Creek are protected for warm water aquatic life (Warm 2). The warm designation means the classification standards would be protective of aquatic life normally found in waters where the summer weekly average temperature frequently exceeds 20 °C. The Warm 2 designation means that it has been determined that these waters are not capable of sustaining a wide variety of warm water biota. These waters would also have standards that are protective from primary contact recreation and agriculture.

Groundwater: The project area is located in an area of recharge for the Piceance Creek. Precipitation in this area generally moves from areas of recharge in surface waters and in shallow groundwater during spring melt. A portion of annual precipitation infiltrates to deeper bedrock aquifers that contribute to contact springs. Groundwater occurs in both bedrock and alluvial aquifers beneath Piceance Creek and its tributaries along valley bottoms and are comprised of unconsolidated sand, gravel, silt, and clay. Tributaries to Piceance Creek may have interrupted flow characteristics (i.e. some reaches are ephemeral with water moving in the alluvium and other reaches there is surface expression) as a result of groundwater recharge characteristics.

Contact springs are common in the area and are often the result of upper bedrock aquifers consisting of fractured, lean oil shales and siltstones of the Green River formation above and below the Mahogany Zone or from fractured marlstone of the saturated portion of the overlying Uinta Formation. The permeability of these sediments can vary dramatically vertically and

horizontally thereby resulting in variable porosity and piping that forms groundwater springs. There are productive water zones in the Upper Parachute Creek Group in the Green River Formation sandwiching the Mahogany, called the A-groove and B-groove with the B-groove below the Mahogany. These groundwater zones are characterized by high horizontal conductivity. In general, the B-groove has higher salinity than the A-groove. Dramatic changes in pressure or porosity due to leached mineral zones can cause drilling fluids to be "lost" to the formation. Leached mineral zones contain features such as fractures and solution cavities. Contact springs associated with the A and B groove aquifers in the Upper Parachute Group may have higher than normal horizontal transmissivity from their recharge zones and it is not uncommon to have less than a year or in some cases less than a week movement of shallow groundwater to the surface via fractures faults, and depleted pore space in bedrock materials. Therefore contamination from surface sources or shallow groundwater can quickly be transported to surface waters in this area.

Perched groundwater zones occur locally within the Uinta Formation. These perched zones can occur in the ridges between surface water drainages and may be manifested as springs and seeps above the valley floor in outcrop areas. Recharge areas for most of these springs and groundwater zones is on the top of the Douglas Plateau and Roan Cliffs, to the south of the project area.

Environmental Consequences of the Proposed Action: The proposed action includes building 3 well pads, drilling 40 wells, installation of pipelines, one surface line for freshwater and the construction of an access roads. The construction of pads will involve removing top soil, earthwork, reclamation and installing stormwater BMPs. Building the new access roads will involve stripping the topsoil and windrowing it to the side, digging the barrow ditches and shaping the road crown, replacing the topsoil on cut/fill slopes and barrow ditches, reclamation and stormwater control efforts.

Surface Waters: Clearing, grading, and soil stockpiling activities associated with the proposed action would alter overland flow and natural groundwater recharge patterns. Almost 40 acres of vegetation would be removed to construct the proposed facilities. Potential impacts include surface soil compaction caused by construction equipment and vehicles, which would likely reduce the soil's ability to absorb water, increasing the volume and rate of surface runoff, which in turn would cause increased surface erosion. Runoff associated with storm events may increase sediment/salt loads in surface waters down gradient of the disturbed areas. Sediment may be deposited and stored in minor drainages where it would be readily moved downstream during heavy convection storms. Some sediment from project activities may eventually be carried into Yellow Creek and ultimately to the White River. The distance to the White River would have an attenuating effect on the amount of sediment contributed by project activities to the river. Surface erosion would be greatest during the construction and early production phases of the project and would be controlled using BMPs for stormwater. It is unlikely this increase in sedimentation would be measurable in the White River.

The magnitude of the impacts to surface water resources from project activities depends on the proximity of the disturbance to drainage channels, slope aspect and gradient, degree and area of soil disturbance, soil character, duration of construction activities, and the timely implementation

and success/failure of mitigation measures. Natural factors which attenuate the transport of sediment into creeks include water available for overland flow; the texture of the eroded material; the amount and kind of ground cover; the slope shape, gradient, and length; and surface roughness. These pads are located in relatively flat terrain (less than 25% slopes) and on top of a ridge, therefore impacts are not likely from these activities to surface waters.

Impacts, should they occur, would likely be greatest shortly after the start of construction activities and would likely decrease in time due to stabilization, reclamation, and revegetation efforts. Changes in surface hydrology from road construction would continue through the life of the project and may extend beyond the project life if roads are left in place. Successful reclamation and proper road design would reduce indirect impacts, especially after active construction and drilling activities are completed and interim reclamation is completed on the pad.

Groundwater: Known water bearing zones in the project area are generally above the Wasatch Formation. These include the contact springs, perched aquifers and groundwater zones described in the Affected Environment. Proposed surface casing would be below the top of the Wasatch Formation, thus ensuring continued integrity and functionality of the groundwater resources identified. If a surface casing fails, circulation is lost and/or cementing is poor, there is a potential for commingling of drilling water with waters from the upper and lower aquifers, or cross contamination of groundwater zones. The commingling of such water could result in localized contamination of aquifers from more saline waters in deeper formations. With proper drilling and completion practices, mixing of lower aquifers with the upper or alluvial aquifers and the contamination of groundwater resources is unlikely.

Environmental Consequences of the No Action Alternative: No impacts identified.

Mitigation:

1. Locate culverts or drainage dips in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or road surfaces. Install culverts with adequate armoring of inlet and outlet. Patrol areas susceptible to road or watershed damage during periods of high runoff.

2. Keep road inlet and outlet ditches, catchbasins, and culverts free of obstructions, particularly before and during spring run-off. Routine machine-cleaning of ditches should be kept to a minimum during wet weather. Leave the disturbed area in a condition that provides drainage with no additional maintenance.

3. Culverts and waterbars should be installed according to BLM Manual 9113 standards and sized for the 10-year storm event with no static head and to pass a 25-year event without failing.

4. Pursuant to Onshore Order No. 7, a permanent disposal method for produced water must be approved by BLM and in operation 90-days after well completion.

Finding on the Public Land Health Standard for water quality: It is unlikely that the access road and well pad construction, as well as drilling and production activities would result in an exceedance of state water quality standards. Cumulative impacts from this activity and others may eventually impact sediment yields to the degree that they impact listing of Piceance Creek on the 303d list of Impaired Waters.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: There are no riparian or wetland resources that have the potential to be influenced by the proposed action. All three well locations are located on top of ridges and removed from drainage bottoms. The nearest system supporting riparian communities is Piceance Creek, which is separated from the project area by over five miles of ephemeral channel at its nearest point.

Environmental Consequences of the Proposed Action: The construction of the proposed well pads, roads and pipelines would have no direct or indirect influence on riparian habitats. With the application of best management practices (BMPs) associated with soil erosion there is no reasonable likelihood that fugitive sediments would have any influence on the function or condition of the Piceance Creek system.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have any direct or indirect influence on downstream riparian habitats.

Mitigation: None

Finding on the Public Land Health Standard for riparian systems: Piceance Creek, the nearest system supporting riparian communities, is separated from the project area by over five miles of ephemeral channel at its nearest point. Neither the proposed or no-action alternative would have any reasonable potential to influence the function or condition of riparian values in this system.

VEGETATION (includes a finding on Standard 3)

Affected Environment: Location PCU 296-6C1-C10 is a Rolling Loam range site and vegetation consists of an herbaceous understory with mixed mountain and Wyoming big sagebrush and some pinyon beginning to invade the site. Location PCU 296-18A1-A10 is a Loamy Slope range site on a slight north facing slope and vegetation consists and herbaceous understory and mostly pinyon juniper with some Gambel oak interspersed as the overstory. Location PCU 296-18D1-D22 is a Pinyon Juniper range site and vegetation consists of a mix of mountain, and Wyoming big sagebrush, with mid seral pinyon-juniper present and an herbaceous understory.

Environmental Consequences of the Proposed Action: The principal impact to vegetation will be complete removal of vegetation and the earthen disturbance associated with it. The total

acres disturbed could accelerate the rate of plant community fragmentation which is presently occurring in this area of Piceance Basin. In addition, plant community composition, structure and function could diminish, over the long term if noxious/invasive weeds such as mullein, bull thistle, black henbane, cheatgrass or other weeds are allowed to establish and proliferate on the disturbed areas. There will be a low likelihood of long term negative impacts if the proposed mitigation is properly implemented.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation.

Mitigation:

1. The designated Natural Resource Specialist (NRS) for this project is Brett Smithers; phone: (970) 878-3818; Email: (brett_smithers@blm.gov).

2. The designated NRS will be notified 24 hours prior to beginning all construction-related activities associated with this project that result in disturbance of surface soils via email or by phone. Construction-related activities may include, but are not limited to: pad and road construction, clearing pipeline corridors, trenching, etc. Notification for all construction-related activities, regardless of size, that result in disturbance of surface soils as a result of this project is required.

3. All disturbed areas for these three pads shall be seeded with Native Seed Mix #2 (see below). The elevation and vegetation community for this location are: Mid Elevation Sagebrush (5,500-7,200 ft). Therefore it is recommended that this site be seeded between September 1 and March 15. If an alternate date of seeding is requested, contact the BLM WRFO designated NRS working with ExxonMobil prior to seeding for approval.

Cultivar	Species	Scientific Name	Application Rate (lbs PLS/acre)
Rosanna	Western Wheatgrass	*Pascopyrum smithii*	3.5
Nezpar	Indian Ricegrass	*Achnatherum hymenoides*	2.5
Whitmar	Bluebunch Wheatgrass	*Pseudoroegneria spicata ssp. inermis*	3
Critana	Thickspike Wheatgrass	*Elymus lanceolatus ssp. lanceolatus*	2.5
Lodorm	Green Needlegrass	*Nassella viridula*	2
Timp	Northern Sweetvetch	*Hedysarum boreale*	3
	Arrowleaf Balsamroot	*Balsamorhiza sagittata*	3
		TOTALS	19.5

4. All seed tags will be submitted to the designated NRS within 14 calendar days from the time the seeding activities have ended via Sundry Notice (SN). The SN will include the purpose of the seeding activity (i.e., seeding well pad cut and fill slopes, seeding pipeline corridor, etc.). In addition, the SN will include the well or well pad number associated with the seeding activity, if applicable, the name of the contractor that performed the work, his or her phone number, the method used to apply the seed (e.g., broadcast, hydro-seeded, drilled), whether the seeding activity represents interim or final reclamation, an

estimate of the total acres seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.

5. The designated NRS will be notified 24 hours prior to beginning all reclamation activities associated with this project via email or by phone. Reclamation activities may include, but are not limited to, seed bed preparation that requires disturbance of surface soils, seeding, constructing exclosures (i.e., fences) to exclude livestock from reclaimed areas.

6. In an attempt to track interim and final reclamation of federal actions related to the development of federal mineral resources, the operator shall submit Geographic Information System (GIS) data to the WRFO for any post construction (i.e., "as-built") polygon feature that was included in the Application for Permit to Drill (APD) or Sundry Notice, and associated with the proposed action. GIS polygon features may include, but are not limited to, constructed access roads, existing roads that were upgraded, pipeline corridors, and well pad footprints. Geospatial data will be submitted as ArcView datasets (i.e., shapefiles or features), ArcInfo coverages, or as ArcView compatible data files (e.g., AutoCAD export .dwg files). All AutoCAD files must include the projection information and/or spatial (datum) reference to allow import into a spatially referenced GIS format. The preferred spatial reference for AutoCAD .dwg files is State Plane, Colorado North, NAD83, feet. GIS data shall be submitted electronically to WRFO NRS Brett Smithers (brett_smithers@blm.gov; Phone: [970] 878-3818) using the 1983 Geographic Coordinate System (NAD 83 datum). These data shall be submitted within 14 calendar days from the time when construction-related activities have ended for all geographic features associated with the proposed action. If the operator is unable to submit the required information within the specified time period, the operator shall notify the designated BLM contact person (see below) via email or by phone, and provide justification supporting an extension of the required data submission time period. Internal and external review of the reporting process and the adequacy of the associated information to meet established goals will be conducted on an on-going basis. New information or changes in the reporting process will be incorporated into the request, as appropriate. If the operator is unable to send the data electronically, the operator shall submit the data on compact disk(s) to:

   BLM, White River Field Office
   220 East Market Street
   Meeker, Colorado 81641
   Attn: Brett Smithers

   If for any reason the location or orientation of the geographic feature associated with the proposed action changes, the operator shall submit updated GIS data to the WRFO within 7 calendar days of the change. This information should be submitted via Sundry Notice.

7. A Reclamation Status Report will be submitted to the WRFO biannually for all actions that require disturbance of surface soils on BLM administered lands as a result of the proposed action. Actions may include, but are not limited to, well pad and road construction, construction of ancillary facilities, or power line and pipeline construction.

The Reclamation Status Report will be submitted by 15 April and 15 August of each calendar year, and will include the well number, API number, legal description, UTM coordinates, project description (e.g., well pad, pipeline, etc.), reclamation status (e.g., interim or final), whether the well pad or pipeline has been revegetated and/or re-contoured, date seeded, photos of the reclaimed site, estimate of acres seeded, seeding method (e.g., broadcast, drilled, hydro-seeded, etc.), and contact information for the person(s) responsible for developing the report. The report will be accompanied with maps showing each point (i.e., well pad), polygon, or polyline (i.e., pipeline) feature that was included in the report. Geospatial data will be submitted using the NAD83 UTM, Zone 12 North projected coordinate system, the Transverse Mercator projection, and the GCS North American 1983 geographic coordinate system (NAD 83 datum). In addition, scanned copies of seed tags that accompanied the seed bags will be included with the report. Internal and external review of the WRFO Reclamation Status Report, and the process used to acquire the necessary information will be conducted annually, and new information or changes in the reporting process will be incorporated into the report. The Reclamation Status Report will be submitted electronically via email and as a hard-copy to NRS Brett Smithers (brett_smithers@blm.gov). Please submit the hardcopy to:

BLM, White River Field Office
220 East Market Street
Meeker, Colorado 81641
Attn: Brett Smithers

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial)*:* Vegetation in the project area currently meets the Standard on a watershed and landscape basis and is expected to continue to meet the Standard on these bases in the future following implementation of the proposed action.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The primary noxious weeds in the project area are common mullein (*Verbascum thapsus*), bull thistle (*Cirsium vulgare)* and black henbane (*Hyoscyamus niger*). These weeds readily invade areas of unrevegetated earthen disturbance. The invasive alien annual cheatgrass also occurs throughout the project area in association with unrevegetated earthen disturbance along roads, wells, and pipelines. The Magnolia area has a number of noxious weed infestations due primarily to the continuous earthen disturbance which has and continues to occur there.

Environmental Consequences of the Proposed Action: Development of PCU 296-18A1-A10, PCU 296-18D1-D22 and PCU 296-6C1-C10 pads, access roads and associated pipelines as stated in the proposed action will create approximately 40 acres of new earthen disturbance, which if it is not revegetated with desirable species and/or treated with herbicides to eradicate noxious weeds and cheatgrass, will likely be invaded and dominated by noxious weeds/cheatgrass, which would increase the potential for fire and the consequent further proliferation of cheatgrass. Noxious weeds could also spread from the project site to

surrounding native rangelands resulting in a long term negative impact. Continued proliferation of noxious weeds/cheatgrass will perpetuate a downward cycle of degradation of the affected plant communities that will be largely irreversible. However, there will be a low likelihood of long term negative impact if the proposed mitigation is properly implemented.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation.

Mitigation:

1. The operator will be required to monitor the project area for the life of the project and control and or eradicate noxious and invasive species which occur on site using materials and methods approved in advance by the Authorized Officer.

THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES (includes a finding on Standard 4)

Affected Environment: There are no plant species listed, proposed, or candidate to the Endangered Species Act, or plants considered sensitive by the BLM, that are known to inhabit areas influenced by the proposed action.

Environmental Consequences of the Proposed Action: The proposed action is not expected to affect special status plant species or associated habitats.

Environmental Consequences of the No Action Alternative: The no action alternative is not expected to affect special status plant species or associated habitats.

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species: The proposed and no-action alternatives are not expected to affect populations or habitats of plants associated with the Endangered Species Act or BLM sensitive species and, as such, should have no influence on the status of applicable Land Health Standards.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: There are no threatened or endangered animal species that are known to inhabit or derive import use from the project area.

PCU 296-6C is located in an expansive Wyoming big sagebrush park with low density encroaching piñon-juniper. The area surrounding this location is heavily developed, with several industrial facilities within one mile. The pad is located on the extreme edge of the area delineated by the Colorado Division of Wildlife (CDOW) as the overall range of the Parachute-

Piceance-Roan greater sage-grouse population. On 5 March 2010, the US Fish and Wildlife Service (USFWS) concluded that the greater sage-grouse warranted listing as an endangered species under the Endangered Species Act, but that listing was precluded by the need to complete listing actions of higher priority. Range-wide, this species is considered a candidate for listing--a designation that affords management attention equivalent to that of species considered "sensitive" by the BLM.

The closest lek, Magnolia #3, which was last active in 2008, is approximately 1.9 miles from this location. The Magnolia area hosts a small, remnant population of greater sage-grouse that are the target of population and habitat restoration efforts by the BLM and CDOW. Suitable habitat is generally confined to a relatively narrow 2- to 3-mile band of sage steppe habitats north of County Road (CR) 3 and ~2 miles east of this location. The western edge of Magnolia, where this pad is located, was historically occupied by sage-grouse. However, there have been no birds observed in this area in recent decades due to increased piñon-juniper and serviceberry encroachment and past industrial activity.

PCU 296-18D is bordered by CR 76 on the southeast side. Younger, dense piñon-juniper is common on the south portion of the pad. The remainder of the pad is a Wyoming big sagebrush community with mixed serviceberry, snowberry and rabbit brush. Immature piñon-juniper is scattered throughout the pad site.

PCU 296-18A is wedged between a well-traveled road (CR 76) to the northeast, a pipeline corridor to the southwest and an existing well pad immediately adjacent to the east. The pad itself is situated in a Wyoming big sagebrush park heavy with encroaching piñon-juniper, serviceberry and snowberry. Some larger piñons are located on the pad; however most of the mature trees are located adjacent (west) of the location.

Piñon-juniper woodlands surrounding the PCU 296-18A location (west and south) have extremely limited potentially to provide habitat for northern goshawk, a BLM sensitive species. Goshawks are a relatively rare resident in the White River Resource Area. In general this species prefers to nest in contiguous aspen stands, or spruce-fir/aspen mix stands. Within the last several decades however, approximately half a dozen nests have been found in low to mid elevation (6500 ft) piñon-juniper woodlands throughout the Piceance Basin. The nearest known goshawk nest (active in 2010) is over 2 miles from the PCU 296-18A location.

Both piñon and juniper may also provide potential roost sites for Townsend's big-eared bat and fringed and Yuma myotis, all BLM sensitive species. Fringed myotis and Townsend's big-eared bats do not make long distance migrations and may be present in the general area year-round if suitable hibernacula are available. In this case, the overall abundance of bats is likely constrained by the paucity of maternity and hibernation roost habitat that could be expected to harbor larger numbers of bats (e.g., caves, mines, buildings) and use of the project area is likely limited to the support of small numbers of non-breeding animals during the summer months. Yuma myotis is typically found in Colorado from April through September. In the project area, the most likely roost substrates available are trees and rock outcrops.

See discussion on BLM-sensitive aquatic species in Aquatic Wildlife section.

Environmental Consequences of the Proposed Action: The proposed action would directly remove approximately 28.8 acres of Wyoming big sagebrush habitat and 10.8 acres of piñon-juniper woodlands. Under natural succession regimes these communities would take anywhere from 20-30 years (sagebrush communities) to ~100 years (immature piñon-juniper woodlands) to return to preconstruction conditions (following reclamation).

The majority of woodlands directly involved are immature and provide little in the way of nesting substrate for northern goshawk, however mature components are located adjacent to the PCU 296-18A location. Indirectly, increased traffic and activities associated with construction, drilling and completion could lead to avoidance of suitable nesting habitat (mature woodlands) within close proximity of the pad and access road should construction activities occur during the breeding season. Pad development outside the breeding season would have little to no potential to directly impact northern goshawk nesting activities.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have any direct or indirect influence on special status species.

Mitigation: See mitigation regarding raptors in Terrestrial Wildlife section. Should an active goshawk nest be located there would be no development activities allowed within ½ mile of the identified nest site from February 1 through August 15 or until young have fledged and dispersed from the nest stand (TL-01 WRFO ROD). No surface occupancy would be allowed within ¼ mile of identified nests (NSO-02 WRFO ROD).

Finding on the Public Land Health Standard for Threatened & Endangered species: The area potentially influenced by the proposed and no-action alternatives does not currently support habitats associated with listed animal species, therefore, neither alternative would influence the applicable rangeland health standards. Woodlands surrounding the PCU 296-18A have potential to serve as roosting or nesting habitat for BLM sensitive animals. While the proposed action would result in an incremental loss of woodland habitat it would have no substantive influence on habitat cores and, on a landscape scale; its implementation would not interfere with continued meeting of the land health standards.

Greater sage-grouse have not occupied habitats surrounding the PCU 296-6C location for several decades most likely as a result of past industrial activity and vegetation succession. The proposed action will not have any influence on continued meeting of land health standards in core sage-grouse habitats (east of the project area).

MIGRATORY BIRDS

Affected Environment: PCU 296-6C is located on the west edge of a heavily developed area (several industrial facilities within one mile). Existing pipeline corridors border the northeast and southeast sides of the pad. Wyoming big sagebrush (with some encroaching piñon-juniper) is the dominant vegetation community at this location.

Both the PCU 296-18A and 18D locations (separated by ~300 meters) are bordered by CR 76 and/ or existing pipeline corridors. The PCU 296-18A location lies immediately adjacent (separated only by a pipeline corridor) to an existing 4 acre pad. The PCU 296-18D location is separated from an existing 3.2 acre facility by ~130 meters. Vegetation at the proposed locations are a mix of immature piñon-juniper, Wyoming big sagebrush, serviceberry and snowberry.

The mid elevation (7300 – 7400 ft) sagebrush and piñon-juniper communities provide suitable nesting habitat for several species of migratory birds during the breeding season (May 15 – June 15). The only Bird of Conservation Concern (BOCC; designated regionally by the USFWS for long-term declining population trends) within the project area are Brewer's sparrow (sagebrush communities) and juniper titmouse (piñon-juniper woodlands).

Although these locations have no open water or wetland areas that support or attract waterfowl use, the development of reserve pits that contain drilling fluids have attracted waterfowl use, at least during the migratory period (i.e., local records: mid-March through late May; mid-October through late November).

Environmental Consequences of the Proposed Action: The proposed action would involve the direct removal of approximately 29 acres of Wyoming big sagebrush habitat and 11 acres of piñon-juniper woodlands. Under natural succession regimes, these communities would take anywhere from 20-30 years (sagebrush) to 100+ years (piñon-juniper) to return to preconstruction conditions (following final reclamation).

It is inevitable that, due to the number of wells involved (10 – 20/pad) and the amount of time needed to continuously drill out each pad (~2 years), some portion of the proposed action (construction, drilling etc.) will coincide with the migratory bird nesting season. While there will certainly be indirect effects (see discussion below), the direct impacts (e.g., displacement, nest abandonment and possible mortality, particularly of nestlings) would be reduced if vegetation clearing (pad construction) were to take place outside of the breeding window (~ May 15 – July 15).

Indirectly, the proposed action could impact an additional 33 acres of functional forage and cover resources due to reductions in nest densities and avoidance of habitats associated with increased traffic and construction activities. For example, Ingelfinger and Anderson (2004) showed a reduction by 39-60% in nest densities of Brewer's sparrows and sage sparrows within 100 m of roads in a natural gas field. Based on breeding densities within the White River Resource Area, it is expected that pad and access road construction could displace or reduce nest densities for up to 12-17 pair of breeding birds, most of which would be more generalized species but undoubtedly some species of higher interest would be involved. Due to the proximity of all three locations to existing disturbances/development (e.g., well-established roads, pipeline corridors or well pads), it is suspected that nest densities are currently suppressed to some degree.

It has been brought to BLM's attention that in certain situations migratory waterfowl have contacted drilling or frac fluids (i.e., stored in reserve pits) during or after completion operations and are suffering mortality in violation of the Migratory Bird Treaty Act. The extent and nature

of the problem is not well defined, but is being actively investigated by the federal agencies and the companies. Until the vectors of mortality are better understood, management measures must be conservative and relegated to preventing bird contact with frac and drilling fluids that may pose a problem.

Environmental Consequences of the No Action Alternative: There would be no direct or indirect impacts to migratory birds under the no action alternative.

Mitigation:

1. The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to migratory waterfowl, shorebirds, wading birds and raptors during completion and after completion activities have ceased. Methods may include netting or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: The nearest system supporting higher-order vertebrate populations is Piceance Creek. This system provides habitat for native fish species such as speckled dace, flannelmouth sucker and mountain sucker – both BLM sensitive. Northern leopard frog, another BLM-sensitive species are found along this channel.

Environmental Consequences of the Proposed Action: All three pads are situated atop ridges. At its nearest point, the project area is separated from Piceance Creek by over five miles of ephemeral channel. With the application of BMPs associated with soil erosion there is no reasonable likelihood that fugitive sediments would have any influence on the function or condition of the Piceance Creek channel, its aquatic wildlife or associated habitats.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have any direct or indirect influence on downstream aquatic habitat.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): Piceance Creek, the nearest system supporting aquatic resources, is separated from the project area by over five miles of ephemeral channel. Neither the proposed or no-action alternative would have any reasonable potential to influence the function or condition of aquatic habitat values within the Piceance Creek channel.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The mid elevation (7300 – 7400 feet) sagebrush, mixed mountain shrub and piñon-juniper communities surrounding the PCU 296-18A and 18D locations lie just within the eastern boundary of the area delineated by CDOW as mule deer severe winter range - a specialized component of winter range that periodically supports virtually all an area's deer under the most severe winter conditions (i.e., extreme cold and heavy snowpack). These ranges typically sustain big game use from January through April. The PCU 296-6C pad is located within big game general winter range. These ranges receive heaviest use from late fall throughout the early winter months.

Mature components of piñon-juniper west of the PCU 296-18A pad may potentially provide nesting substrate for woodland (accipitrine) raptors in addition to long-eared and saw-whet owls. There are several known active (2010) nests within one mile of this location.

The distribution and abundance of small mammal populations are poorly documented within the project area; however, the species that are likely to occur in this area display broad ecological tolerance and are widely distributed throughout the Resource Area. Trapping efforts undertaken in 2010 indicate a high tendency, in both sagebrush and piñon-juniper communities for more generalized species such as deer mouse and least chipmunk. No narrowly distributed or highly specialized species or subspecific populations are known to occur in the project area.

Environmental Consequences of the Proposed Action: The proposed action would directly remove approximately 29 acres of Wyoming big sagebrush/mixed mountain shrub habitat and 11acres of piñon-juniper woodlands. These communities, which provide forage and cover resources for both big game and nongame species alike, generally take anywhere from 20 years (sagebrush) to over 100 years (immature piñon-juniper) to return to preconstruction conditions.

The long-term occupation on approximately 25 acres of mule deer severe winter range is fairly minor in the context of like habitats available throughout the Piceance Basin; however, the localized influence may have a more pronounced effect on forage availability and local big game distribution. Within the past 5 - 7 years the project area has experienced a substantial increase in development, concentrated mainly on the ridge tops to the northwest, north and northeast (e.g., within 3mile radius of project area, ~400 acres or 5% of disturbance associated solely with pad development (roads and pipelines are not included). Aside from roads and pipelines, little development exists within three miles south of the project area. While the proposed multi-well pads would substantially reduce the extent and distribution of forage and cover resources dedicated to access roads, pipelines, and pads associated with alternate development of separate well pads, these benefits (with respect to wildlife) would be diminished without timely and effective reclamation. Final pipeline reclamation and interim reclamation on all well pads in the proposed action would help offset herbaceous forage losses and accelerate the reestablishment of woody forage and cover components for all resident wildlife.

Development of the proposed well pads would have little direct involvement with habitats typically utilized by breeding raptors (i.e., mature woodlands). However, indirectly,

development of the PCU 296-18A location during the raptor breeding season may disrupt nesting activity adjacent to site due to noise associated with increased traffic, construction and drilling activities.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have any direct or indirect influence on terrestrial wildlife or associated habitats.

Mitigation:

1. There will be no construction and/or drilling activities allowed on the PCU 296-18A and 296-18D locations from January 1 – April 30 to avoid unnecessary activity in mule deer severe winter range. WRFO will except/modify RMP-prescribed timing limitations for those projects (via sundry notice) where there is written documentation affirming mutual consent among CDOW, the project proponent, and BLM. Outside such agreements, WRFO will consider excepting/modifying prescribed timing limitations upon written request from CDOW on a project proponent's behalf.

2. A raptor survey will be required prior to construction of the PCU 296-18A location. All raptor surveys will be performed following methods and procedures described in the WRFO Diurnal Raptor Survey Protocol. The third-party contractor responsible for conducting raptor surveys associated with the proposed action will contact the WRFO and request the most current version of the WRFO Diurnal Raptor Survey Protocol prior to performing surveys. Survey results must be provided to BLM staff biologists prior to construction. Should an active nest be located the appropriate timing limitations would be applied depending on species (TL -01 and TL-04 and NSO-02 and NSO-03 WRRA/ROD).

3. All raptor nests (e.g., stick-built structures, nest cavities, eyries), regardless of their breeding or non-breeding season status, are to be reported to WRFO NRS, Brett Smithers (see contact information below) via phone (970-878-3818) or by email (preferred; brett_smithers@blm.gov) within 24 hrs of the observation. Please provide the following when reporting nests: 1) the species observed using the nest; 2) UTM coordinates for the nest (recorded in NAD83, Zone 12); 3) date nest was first documented; 4) brief summary describing adult and/or juvenile behavior, number of nestlings observed, etc.; and, 5) relevant project information (e.g., project name and NEPA document number, if known).

4. If an occupied raptor nest is located during raptor surveys, standard timing limitation and No Surface Occupancy lease stipulations will be applied to each well on a case-by-case (i.e., site-specific) basis.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): The project area generally meets the land health standards on a landscape scale. The proposed action is expected to incrementally reduce local habitat capacity over the life of the project. As conditioned by reclamation-related provisions, implementation of

the proposed action would not interfere with continued landscape level maintenance of the land health standards.

WILD HORSES

Affected Environment: The proposed action is located in the area locally known as Magnolia Bench. This area is not part of the Piceance-East Douglas Herd Management Area which manages for wild horses and more accurately described as an area completely separate from the PEDHMA by a portion of the Square S Allotment, Piceance Creek and Rio Blanco County Road #5. However, it is currently estimated that approximately 13 to 18 head of wild horses utilize this area. The last unsuccessful attempt at gathering all of these wild horses in this area occurred in 2002. The White River Field Office proposes to gather these wild horses from this area in October 2010 with the objective of gathering and removing all of the wild horses in this area.

Environmental Consequences of the Proposed Action: No impacts to wild horses would result from the Proposed Action.

Environmental Consequences of the No Action Alternative: No impacts to wild horses would result from the No Action Alternative.

Mitigation: None

CULTURAL RESOURCES

Affected Environment: **PCU 296-18A**: The proposed well pad location, access route and well tie pipeline has been inventoried at the Class III (100% pedestrian) level (Stahl 2010, Compliance Dated 5/28/2010) with no new cultural resources identified in the inventoried area. There are no known cultural resources within 308 meters of the proposed well pad location.

PCU 296-18D: The proposed well pad location, access route and well tie pipeline has been inventoried at the Class III (100% pedestrian) level (Stahl 2010, Compliance Dated 5/28/2010) with no new cultural resources identified in the inventoried area. There are no known cultural resources within 308 meters of the proposed well pad location.

PCU 296-6C: The proposed well pad location, access route and well tie pipeline has been inventoried at the Class III (100% pedestrian) level (Stahl 2010, Compliance Dated 5/28/2010) with no new cultural resources identified in the inventoried area. There are no known cultural resources within 308 meters of the proposed well pad location.

Environmental Consequences of the Proposed Action: The proposed PCU 296-18A1-A10 A10 well pad, access and pipeline, the PCU 296-18D1-D22 well pad, access and pipeline, and the PCU 296-6C1-C10 well pad, access and pipeline will not impact any known cultural resources.

Environmental Consequences of the No Action Alternative: There would be no new impacts to cultural resources.

Mitigation: For all three well pads and associated access roads and pipelines, the following mitigation should apply:

1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

PALEONTOLOGY

Affected Environment: **PCU 296-18A**: The proposed well pad location, access road and well tie pipelines are located in an area generally mapped as the Uinta Formation (Tweto 1979) which the BLM, WRFO has classified as a PFYC 5 fossil bearing formation, meaning it is known to produce scientifically important fossil resources (Armstrong and Wolny 1989).

PCU 296-18D: The proposed well pad location, access road and well tie pipelines are located in an area generally mapped as the Uinta Formation (Tweto 1979) which the BLM, WRFO has

classified as a PFYC 5 fossil bearing formation, meaning it is known to produce scientifically important fossil resources (Armstrong and Wolny 1989).

PCU 296-6C: The proposed well pad location, access road and well tie pipelines are located in an area generally mapped as the Uinta Formation (Tweto 1979) which the BLM, WRFO has classified as a PFYC 5 fossil bearing formation, meaning it is known to produce scientifically important fossil resources (Armstrong and Wolny 1989).

Environmental Consequences of the Proposed Action: If it becomes necessary to excavate into the underlying rock formation to level the well pad, construct any access road, excavate any reserve/blooie/cuttings pits or bury any of the proposed pipelines there is the potential to impact scientifically important fossil resources.

Environmental Consequences of the No Action Alternative: There would be no new impacts to fossil resources.

Mitigation: For all three well pads and associated access roads and pipelines, the following mitigation should apply:

1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. If it becomes necessary to excavate into the underlying rock formation for any reason a paleontological monitor shall be present before and during all such excavations.

ELEMENTS NOT PRESENT OR NOT AFFECTED:

No flood plains, prime and unique farmlands, exist within the area affected by the proposed action. There are also no known Native American religious or environmental justice concerns associated with the proposed action.

OTHER ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Other Element	NA or Not Present	Applicable or Present, Not Brought Forward for Analysis	Applicable & Present and Brought Forward for Analysis
Visual Resources			X
Fire Management		X	
Forest Management			X
Hydrology/Water Rights		X	
Rangeland Management			X
Realty Authorizations			X
Recreation			X
Access and Transportation			X
Geology and Minerals			X
Areas of Critical Environmental Concern	X		
Wilderness	X		
Wild and Scenic Rivers	X		
Cadastral	X		
Socio-Economics		X	
Law Enforcement		X	

VISUAL RESOURCES

Affected Environment: The Magnolia Bench area is currently being actively developed for the extraction of natural gas resources. The area is currently classified as a Visual Resource Management (VRM) Class III area. The objective of the VRM Class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Environmental Consequences of the Proposed Action: The proposed action is in an area that is actively being developed. The proposed action is adjacent to existing pipelines, roads, well pads and powerlines ROWs. The majority of the attention will be drawn during the construction and drilling phases of the project due to heavy equipment activities and the presence of the drilling equipment. These activates are short in duration relative to the life of the wellpad and associated disturbance and will not have a lasting visual impact on the casual observer. The remaining disturbed areas will not draw attention to the casual observer due to the amount of

activity that is in the surrounding area. Immediate reclamation and revegetation of the disturbed areas will reduce the outline of the disturbance and painting of all of the above ground permanent structures will allow for less of a visual impact. Through those two actions the level of change to the characteristic landscape would be moderate, and the objectives of the VRM Class III classification would be retained.

Environmental Consequences of the No Action Alternative: There would be no increase in surface disturbance in the area and no visual impacts.

Mitigation:

1. Paint all permanent structures (onsite greater than 6 months) with Juniper Green from the Standard Environmental Color Chart, CC-001 (2008). Initial painting will occur with 6 months post completion and regularly maintained.

FIRE MANAGEMENT

Affected Environment: The proposed actions for the three wellpads are located within two Fire Management Polygons. Wellpad PCU 296-6C is located within the B8 Magnolia polygon with sagebrush being the dominant vegetation. The PCU 296-18A and PCU 296-18D wellpads are located within the D4 Little Hills polygon. The vegetation within this polygon is characterized as PJ Woodland, Wyoming Big Sagebrush, mountain shrub and Douglas Fir. Naturally ignited wildland fire played a role in the function of the ecosystem and is encouraged within the D4 polygon but the management of fires within the B8 polygon has constraints due to the amount of industrial development and a suppression oriented response is required.

Environmental Consequences of the Proposed Action: Due to the existing tree cover of pinion and juniper at the locations for the proposed actions, there will be a need for the operator to clear some of these trees. If not adequately treated, these trees will result in elevated hazardous fuels conditions and remain on-site for many years. Vegetation removal and soil disturbance could provide an opportunity for noxious weeds and cheatgrass to establish or expand in the area, which would increase fine fuel loads. These accumulations of dead material are very receptive to fire brands and spotting from wind driven fires and can greatly accelerate the rate of spread of the fire front. If not treated the slash and woody debris will create an elevated hazardous dead fuel loading which could pose significant control problems in the event of a wildfire. Additionally there would be greater threat to the public, Exxon Mobil personnel, and fire suppression personnel.

The National Fire Plan calls for "firefighter and public safety" to be the highest priority for all fire management activities. During the construction, drilling and possibly the completion phases associated with the proposed project, fire management may have little choice, but to suppress all fires within close proximity to the project area. This aggressive fire suppression response will prevent fire from playing a natural role in creating a vegetation mosaic.

Environmental Consequences of the No Action Alternative: There would be no consequences to fire management.

Mitigation: When working on lands administered by White River Field Office, notify Craig Interagency Dispatch (970-826-5037) in the event of any fire. The reporting party will inform the dispatch center of the location of the fire, size, status, smoke color, aspect, fuel type and contact information. The reporting party or a representative should remain nearby in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response. The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting, grinding, etc. will be suppressed by the applicant only if employee safety is not compromised and if the fire can be safely contained using hand tools and portable hand pumps. If chemical fire extinguishers are used the applicant must notify incoming fire resources of the extinguisher type and the location of use. Natural ignitions caused by lightning will be managed by federal fire personnel. If a natural ignition occurs within the approved project area, the fire may be initially contained by the applicant only if employee safety is not compromised. The use of heavy equipment for fire suppression is prohibited, unless authorized by the Field Office Manager. Moreover, removal of slash and woody debris associated with the proposed action shall follow mitigations as written under Forest Management.

FOREST MANAGEMENT

Affected Environment: The proposed locations for PCU-296-6C, PCU-296-18A and PCU-296-18D are located within various amounts of pinion and juniper. PCU296-18A and PCU296-18D are located within a young stand of pinion and juniper within a productive exposure. PCU 296-18A also has present mature pinion and juniper within a productive exposure. PCU 296-6C has the presence of a few mature and young juniper. Productive exposure types occur on primarily lower gradient slopes and north and east aspects. Growth rates are higher in these areas due to soil features which allow for effective use of precipitation. Mature pinion/juniper trees on productive exposure establish themselves as the dominant plant community on the site. Young pinion/juniper trees are a component of the entire plant community. Young trees tend to invade sagebrush communities over time. Both the young and mature stands are valuable locally as a source of fire wood, posts and poles for fence construction, and Christmas trees.

Environmental Consequences of the Proposed Action: Due to the nature of the proposed action, there is a need to remove the pinion and juniper during the construction of the wellpads, access roads and the pipelines. The following table shows the estimated loss of woodland. Following reclamation of associated disturbances it is expected that pinion and juniper will invade the site within 70 years and would develop a mature stand within 250-350 years.

Well Name	Acreage In Woodlands					
	Pad Acres	Access Rd. (Ac)	Pipeline	Acres Disturbed (Total)	Stand Class	Total Cords
PCU 296-6C	.5	0	0	.5	Young	1
PCU 296-18D	11	.2	.2	11.4	Young	34.2
PCU 296-18A	2	.25	0	2.25	Young	6.75
	2.5	0	0	2.5	Mature	12.5

Under the proposed action approximately 16.9 acres of woodlands would be removed. The loss of pinion-juniper woodland would adversely affect wildlife and nesting habitat. Impacts would be long-term until woodlands regenerate successfully. Removal of mature and middle-aged pinion and juniper trees would reduce the potential for outbreak of woodland diseases and pest infestations. By reducing the stand size of pinion and juniper trees in areas historically included in sagebrush and grass communities, it would increase the open areas preferred as foraging areas by wildlife and livestock. Erosion potential would increase with the removal of vegetation, especially at sites where tree density and canopy cover has naturally decreased the understory component of grasses, shrubs, and forbs. Acceptance of mitigation measures outlined below would reduce the build-up of cleared woody material from the project area, which would reduce the likelihood of slash contributing to possible large fire events.

Environmental Consequences of the No Action Alternative: There would be no surface disturbing activities that would result in the loss of pinion and juniper woodlands.

Mitigation: In accordance with the 1997 White River RMP/ROD page 2-22, all trees removed in the process of construction shall be purchased from the BLM. Trees or shrubs that must be removed for construction or ROW preparation shall be cut down to a stump height of 6 inches or less prior to other heavy equipment operation. Trees removed during construction that are not needed for reclamation purposes shall be cut in four foot lengths (down to 4 inches diameter) and placed in manageable stacks immediately adjacent to a public road to facilitate removal by the public or removed for company use. Woody materials required for reclamation shall be stockpiled along the margins of the authorized use area separate from the topsoil piles. Once the disturbance has been recontoured, reseeded and successful revegetation has been accepted by the BLM WRFO, the stockpiled woody material shall be scattered across the reclaimed area where the material originated. Redistribution of woody debris will not exceed 20% ground cover. Woody material will be distributed in such a way to avoid large concentrations of heavy fuels and to effectively deter vehicle use.

RANGELAND MANAGEMENT

Affected Environment: The proposed PCU 296-18D1-D22 and PCU 296-6C1-C10

pad locations, access roads and pipelines are located within the Little Hills (06006) allotment. This allotment is permitted to Burke Brothers as follows:

Allotment		Permit Number	Livestock		Period of Use	Percent Public Land	Authorized Use (AUM)
06006	Little Hills [illegible]	051405	50	C	04/15-04/30	100	26
	Burke Brothers	051405	110	C	05/01-10/30	100	662
			5	H	05/01-10/30	100	30
			98	C	05/01-10/30	100	590
			100	C	05/01-10/30	100	602
			145	C	12/01-12/31	100	148

The proposed PCU 296-18A1-A10 pad location, access road and pipeline are within the McKee/Collins allotment. This allotment is used by Pat Johnson and MTW Ranch livestock operations in late fall and winter. The permitted use is as follows:

Allotment	Permit Number	Livestock	Number	Period of Use	Percent Public Land	Authorized Use (AUM)
McKee/Collins	0501408	C	91	11/1 – 11/30	100	91
		C	182	12/1 – 12/31	100	188
		C	91	1/1 – 1/30	100	91

Environmental Consequences of the Proposed Action: If development occurs during the period livestock are grazing they may avoid the areas associated with the proposed action due to increased noise and vehicle activity. Throughout the production phase there should be little to no affect to livestock use in the area. There are no existing range improvement projects (ponds, fences, gates, corrals, etc.) in the immediate disturbance area. The proposed action will disturb approximately 28.5 acres in the Little Hills allotment initially. After interim reclamation approximately seven acres will remain unvegetated, resulting in the long term loss of about one AUM of livestock forage. An additional two AUMs of forage will be lost due to dust from roadways accumulating on vegetation making it unpalatable.

The proposed action will disturb approximately 11 acres in the McKee/Collins allotment initially. After interim reclamation approximately three acres will remain unvegetated, resulting in the long term loss of less than one AUM of livestock forage. An additional two AUMs of forage will be lost due to dust from roadways accumulating on vegetation making it unpalatable. After successful final reclamation the temporary forage loss associated with the proposed action will be regained, likely resulting in a slight but negligible increase of forage available in the areas previously dominated by pinyon and juniper.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation.

Mitigation: See Vegetation section.

RECREATION

Affected Environment: The proposed action is located within the White River Extensive Recreation Management Area (ERMA). The ERMA is managed by BLM to provide the general public with a highly diverse range of outdoor recreational activities. Recreational uses of lands within the project area are undeveloped and nature-based with no developed recreation sites or facilities. Popular recreational activities within the project area include primitive camping, hiking, off-highway vehicle (OHV) use, hunting and wildlife watching. Hunting is the predominant recreational activity within the ERMA, with the highest rate of use occurring during the upland big game hunting season (mid August through December). The area of the proposed action is being actively developed for the extraction of natural gas. The activities associated with the development of natural gas include but are not limited to construction of roads and pipelines and large amounts of heavy truck traffic to support the drilling and completion operations.

Environmental Consequences of the Proposed Action: The proposed action will disturb 39.6 acres of the surface removing areas of dispersed recreational opportunities and increase the amount of human activity in the Magnolia area. This increased human activity will reduce the solitude associated with the typical dispersed recreation that occurs within the ERMA and diminish the recreation user's experience. The activity will continue for the life of the wells located on the wellpad. The greatest disturbing activities will occur during the construction and drilling phases of the wells. Once the wells are completed the human presence will reduce to activities associated with observations and maintenance.

Environmental Consequences of the No Action Alternative: There would be no increase in human presence and no loss of dispersed recreation opportunities.

Mitigation: None

ACCESS AND TRANSPORTATION

Affected Environment: There are two Rio Blanco County (RBC) roads that access the Magnolia Bench and the proposed actions, RBC 3 and 76. There are also a large amount of BLM roads in the area that are both numbered and unnumbered around the proposed area of development. BLM roads 1266 and 1176 are the primary BLM roads used for access into the proposed wellpads. RBC 76 is primarily gravel surfaced and all of the BLM roads are a natural dirt surface.

Environmental Consequences of the Proposed Action: The PCU 296-6C is located adjacent to an unnumbered BLM road with access traversing BLM road 1266 and RBC 76. The PCU 296-18D is located adjacent to RBC 76 and PCU 296-18A is located adjacent to BLM road 1176 accessed by RBC 76. The amount of traffic associated with the construction, drilling and the completion of the wells will cause degradation to the surface of the roads. The breakdown of the dirt surface will reduce the ability to properly drain water creating mud holes in the road and during dry conditions increase fugitive dust in the area which will reduce visibility.

Environmental Consequences of the No Action Alternative: There would be no increased activities in the area that would degrade any road surface.

Mitigation:

1. During dry and dusty conditions the applicant will use an approved dust suppressant to mitigate the fugitive dust that would reduce visibility on the access roads to the well pads. The current condition of the BLM roads is the standard and the applicant will regularly maintain the BLM roads utilized as access to meet or exceed their current condition to allow for safe public use.

REALTY AUTHORIZATIONS

Affected Environment: The project is proposed in an area with current development of oil and gas infrastructure. Construction will cross existing linear facilities, a majority of which are held by the proponent. There are also White River Electric power lines paralleling the public (County and BLM) roads. The PCU-296-6C location is adjacent to a multi-line transmission corridor. The proposed activities will take place within the Piceance Creek Unit (PCU).

Environmental Consequences of the Proposed Action: Construction activity for the three new pads and associated facilities could cause disruption or damage to existing uses. Careful location prior to construction would be required, i.e. Colorado One Call. Primary access will be via RBC Rd 76 and may require appropriate county permits as well. Because the proposed project is located within the PCU, the roads and any pipelines for gas or combined liquids would not require Realty authorization.

The Produced Water Distribution and Disposal (PWDD) line will require a right-of-way (ROW) because the transported product crosses unit lines. It would be authorized as an amendment to COC74420 for well connections to the PWDD system. Freshwater lines to the PCU 296 18A and 18D well pads would be authorized as an amendment to the existing water storage facility COC73289.

Well #	Use	Length-ft	Width-ft	acres	COC#
PCU296-18D	Produced water	1700	30	1.17	74420
PCU296-18A	Produced water	180	30	0.12	74420
PCU296-6C	Produced water	600	30	0.41	74420
Total COC74420		2480		1.7	
PCU296-18D	Fresh water	2100	30	0.145	73289
PCU296-18A	Fresh water	600	30	0.41	73289
Total COC73289		2700		0.555	

Environmental Consequences of the No Action Alternative: If the proposed action is not approved, there would be no impacts. However, an alternative method of transporting and disposal of produced water would have to be considered which could have impacts.

Mitigation:

1. The holder is responsible for obtaining and implementing appropriate permits from state and local governments.

GEOLOGY AND MINERALS

Affected Environment: The surface geologic formation of the three well pads is Uinta and ExxonMobil's targeted zone is in the Mesaverde. During drilling potential water, oil shale, sodium, and gas zones will be encountered from surface to the targeted zone. Fresh water aquifer zones that will be encountered during drilling are commonly known as; the Perched in the Uinta, the A-groove, B-groove and the Dissolution Surface in the Green River formation. These fresh water aquifer zones along with the Wasatch formation are known for difficulties in drilling and cementing. Oil shale and sodium resources are located in the Green River formation. These proposed wells are part of the 20 acre down-hole spacing full field development for the Piceance Creek Unit COC47666CX.

Environmental Consequences of the Proposed Action: The proposed action may affect the fresh water aquifers in the Green River formation if loss circulation occurs during drilling and cementing operations of the surface casing. Correctly implemented cementing and completion procedures of the proposed action isolates the formations and will prevent annular migration of gas, water, and oil between formations and aquifer zones.

Development of these wells will deplete the hydrocarbon resources in the targeted formation.

Environmental Consequences of the No Action Alternative: The natural gas resources in the targeted zone would not be recovered at this time.

Mitigation: None

CUMULATIVE IMPACTS SUMMARY

Future natural gas development is reasonably certain to occur in the project area, and additional development of this unit and neighboring units is likely. If development of natural gas resources in these units continues to expand in both geographic extent and intensity, further increases in long-term surface disturbance, water extraction, and re-injection would occur. Regarding the analysis of cumulative effects of this action on renewable and non-renewable resources associated with this project and other future projects, that are similar in both scope and extent, cumulative impacts of oil and gas activities are addressed in the White River ROD/RMP for each resource value (USDI BLM 1997). Moreover, the current proposed action, as described above, is consistent with the scope of impacts addressed in the White River ROD/RMP.

REFERENCES CITED:

Armstrong, Harley J., and David G. Wolny
1989 Paleontological Resources of Northwest Colorado: A Regional Analysis. Museum of Western Colorado, Grand Junction, Colorado.

Stahl, Jenny
2010 ExxonMobil Oil Corporation: A Class III Cultural Resources Inventory of the Proposed PCU 296-6C and PCU 296-18S Well Pads and Access Roads and the Proposed PCU 196-18D Well Pad, Access Road, and Pipelines in Rio Blanco County, Colorado. Metcalf Archaeological Consultants, Inc., Eagle, Colorado. (10-54-04)

Tweto, Ogden
1979 Geologic Map of Colorado. United States Geologic Survey. Department of the Interior, Reston, Virginia.

PERSONS / AGENCIES CONSULTED: None

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility	Date Signed
Bob Lange	Hydrologist	Air Quality, Water Quality (Surface and Ground), Hydrology and Water Rights, and Soils	9/20/2010
Jill Schulte	Botanist	Areas of Critical Environmental Concern, Threatened and Endangered Plant Species	7/20/2010
Michael Selle	Archeologist	Cultural Resources, Paleontological Resources	5/28/2010
Mary Taylor	Rangeland Management Specialist	Invasive, Non-Native Species, Vegetation , Rangeland Management	8/17/2010
Lisa Belmonte	Wildlife Biologist	Migratory Birds, Threatened, Endangered and Sensitive Animal Species, Terrestrial and Aquatic Wildlife, Wetlands and Riparian Zones	9/21/2010
Christina Barlow	Natural Resource Specialist/HazMat Coordinator	Wastes, Hazardous or Solid	
Jim Michels	Outdoor Recreation Planner	Wilderness, Access and Transportation, Recreation,	8/30/2010
Jim Michels	Forester /Fire / Fuels Technician	Fire Management, Forest Management	8/30/2010
Paul Dagget	Mining Engineer	Geology and Minerals	
Linda Jones	Realty Specialist	Realty Authorizations	8/18/2010
Jim Michels	Natural Resource Specialist / Outdoor Recreation Planner	Visual Resources	8/30/2010
Melissa J. Kindall	Range Technician	Wild Horse Management	09/21/2010

Finding of No Significant Impact/Decision Record (FONSI/DR)

DOI-BLM-CO-110-2010-0115-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analysis of the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION/RATIONALE: It is my decision to approve the proposed action as described in this EA with the addition of the mitigation listed below.

MITIGATION MEASURES:

1. All access roads will be treated with water and/or a chemical dust suppressant during construction and drilling activities so that there is not a visible dust trail behind vehicles. All vehicles will abide by company or public speed restrictions during all activities. If water is used as a dust suppressant, there should be no traces of oil or solvents in the water and it should be properly permitted for this use by the State of Colorado. Only water needed for abating dust should be applied.

2. All construction and drilling activity shall cease when soils or road surfaces become saturated to a depth of three inches unless there are safety concerns or if activities are otherwise approved by the Authorized Officer (AO).

3. In order to protect rangeland health standards for soils, erosion features such as riling, gullying, piping and mass wasting on the surface disturbance or adjacent to the surface disturbance as a result of this action will be addressed immediately after observation by contacting the AO and submitting a plan to assure successful soil stabilization with BMPs to address erosion problems.

4. Comply with all Federal, State and/or local laws, rules, and regulations, including but not limited to onshore orders and notices to lessees, addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment.

5. Employ, maintain, and periodically update to the best available technology(s) aimed at reducing emissions, fresh water use and hazardous material utilization, production and releases through all phases of oil and gas exploration, development, and production.

6. When drilling to set the surface casing, drilling fluid will be composed of fresh water, bentonite and/or a benign lost circulation material – that is a lost circulation material that does not pose a risk of harm to human health or the environment, (i.e. cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs or cotton hulls).

7. All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.

8. The operator shall submit an updated Spill Prevention Control and Countermeasures Plan and an updated spill/release contingency plan to the Bureau of Land Management's White River Field Office prior to engaging in construction activities.

9. Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

10. In addition to compliance with the reporting requirements of Notice to Lessee's No. 3A and regardless of a substance's status as exempt or non-exempt, report all emissions or releases of any quantity of any substance that may pose a risk of harm to human health or the environment to the Bureau of Land Management's White River Field Office at (970) 878-3800.

11. Regardless of a substance's status as exempt or non-exempt and regardless of fault, provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment. Where the lessee/operator fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the Bureau of Land Management's White River Field Office may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action shall not relieve the lessee/operator of any liability or responsibility.

12. With the acceptance of this authorization or the running of thirty calendar days from its issuance, whichever occurs first, and during oil and gas exploration, development and production under this authorization, the lessee/operator, and through the lessee/operator, its agents, employees, subcontractors, successors and assigns, stipulates and agrees to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk of harm to human health or the environment.

13. Locate culverts or drainage dips in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or road surfaces. Install culverts with adequate armoring of inlet and outlet. Patrol areas susceptible to road or watershed damage during periods of high runoff.

14. Keep road inlet and outlet ditches, catchbasins, and culverts free of obstructions, particularly before and during spring run-off. Routine machine-cleaning of ditches should be kept to a minimum during wet weather. Leave the disturbed area in a condition that provides drainage with no additional maintenance.

15. Culverts and waterbars should be installed according to BLM Manual 9113 standards and sized for the 10-year storm event with no static head and to pass a 25-year event without failing.

16. Pursuant to Onshore Order No. 7, A permanent disposal method for produced water must be approved by BLM and in operation 90-days after well completion.

17. The designated Natural Resource Specialist (NRS) for this project is Brett Smithers; phone: (970) 878-3818; Email: (brett_smithers@blm.gov).

18. The designated NRS will be notified 24 hours prior to beginning all construction-related activities associated with this project that result in disturbance of surface soils via email or by phone. Construction-related activities may include, but are not limited to: pad and road construction, clearing pipeline corridors, trenching, etc. Notification for all construction-related activities, regardless of size, that result in disturbance of surface soils as a result of this project is required.

19. All disturbed areas for these three pads shall be seeded with Native Seed Mix #2 (see below). The elevation and vegetation community for this location are: Mid Elevation Sagebrush (5,500-7,200 ft). Therefore it is recommended that this site be seeded between September 1 and March 15. If an alternate date of seeding is requested, contact the BLM WRFO designated Natural Resource Specialist working with ExxonMobil prior to seeding for approval.

Cultivar	**Species**	**Scientific Name**	**Application Rate (lbs PLS/acre)**
Rosanna	Western Wheatgrass	*Pascopyrum smithii*	3.5
Nezpar	Indian Ricegrass	*Achnatherum hymenoides*	2.5
Whitmar	Bluebunch Wheatgrass	*Pseudoroegneria spicata ssp. inermis*	3
Critana	Thickspike Wheatgrass	*Elymus lanceolatus ssp. lanceolatus*	2.5
Lodorm	Green Needlegrass	*Nassella viridula*	2
Timp	Northern Sweetvetch	*Hedysarum boreale*	3
	Arrowleaf Balsamroot	*Balsamorhiza sagittata*	3
		TOTALS	19.5

20. All seed tags will be submitted to the designated NRS within 14 calendar days from the time the seeding activities have ended via Sundry Notice (SN). The SN will include the purpose of the seeding activity (i.e., seeding well pad cut and fill slopes, seeding pipeline corridor, etc.). In addition, the SN will include the well or well pad number associated with the seeding activity, if applicable, the name of the contractor that performed the work, his or her phone number, the method used to apply the seed (e.g., broadcast, hydro-seeded, drilled), whether the seeding activity represents interim or final reclamation, an estimate of the total acres seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.

21. The designated NRS will be notified 24 hours prior to beginning all reclamation activities associated with this project via email or by phone. Reclamation activities may include, but are not limited to, seed bed preparation that requires disturbance of surface soils, seeding, constructing exclosures (i.e., fences) to exclude livestock from reclaimed areas.

22. In an attempt to track interim and final reclamation of federal actions related to the development of federal mineral resources, the operator shall submit Geographic Information System (GIS) data to the White River Field Office (WRFO) for any post construction (i.e., "as-built") polygon feature that was included in the Application for Permit to Drill (APD) or Sundry Notice, and associated with the proposed action. GIS polygon features may include, but are not limited to, constructed access roads, existing roads that were upgraded, pipeline corridors, and well pad footprints. Geospatial data will be submitted as ArcView datasets (i.e., shapefiles or features), ArcInfo coverages, or as ArcView compatible data files (e.g., AutoCAD export .dwg files). All AutoCAD files must include the projection information and/or spatial (datum) reference to allow import into a spatially referenced GIS format. The preferred spatial reference for AutoCAD .dwg files is State Plane, Colorado North, NAD83, feet. GIS data shall be submitted electronically to WRFO NRS, Brett Smithers (brett_smithers@blm.gov; Phone: [970] 878-3818) using the 1983 Geographic Coordinate System (NAD 83 datum). These data shall be submitted within 14 calendar days from the time when construction-related activities have ended for all geographic features associated with the proposed action. If the operator is unable to submit the required information within the specified time period, the operator shall notify the designated BLM contact person (see below) via email or by phone, and provide justification supporting an extension of the required data submission time period. Internal and external review of the reporting process and the adequacy of the associated information to meet established goals will be conducted on an on-going basis. New information or changes in the reporting process will be incorporated into the request, as appropriate. If the operator is unable to send the data electronically, the operator shall submit the data on compact disk(s) to:

    BLM, White River Field Office
    220 East Market Street
    Meeker, Colorado 81641
    Attn: Brett Smithers

If for any reason the location or orientation of the geographic feature associated with the proposed action changes, the operator shall submit updated GIS data toWRFO within 7 calendar days of the change. This information should be submitted via Sundry Notice.

23. A Reclamation Status Report will be submitted to the WRFO biannually for all actions that require disturbance of surface soils on BLM-administered lands as a result of the proposed action. Actions may include, but are not limited to, well pad and road construction, construction of ancillary facilities, or power line and pipeline construction. The Reclamation Status Report will be submitted by 15 April and 15 August of each calendar year, and will include the well number, API number, legal description, UTM coordinates, project description (e.g., well pad, pipeline, etc.), reclamation status (e.g., interim or final), whether the well pad or pipeline has been revegetated and/or re-contoured, date seeded, photos of the reclaimed site, estimate of acres seeded, seeding method (e.g., broadcast, drilled, hydro-seeded, etc.), and contact information for the person(s) responsible for developing the report. The report will be accompanied with maps showing each point (i.e., well pad), polygon, or polyline (i.e., pipeline) feature that was included in the report. Geospatial data will be submitted using the NAD83 UTM, Zone 12 North projected coordinate system, the Transverse Mercator projection, and the GCS North American 1983 geographic coordinate system (NAD 83 datum). In addition, scanned copies of seed tags that accompanied the seed bags will be included with the report. Internal and external review of the WRFO Reclamation Status Report, and the process used to acquire the necessary information will be conducted annually, and new information or changes in the reporting process will be incorporated into the report. The Reclamation Status Report will be submitted electronically via email and as a hard-copy to NRS, Brett Smithers (brett_smithers@blm.gov). Please submit the hardcopy to:

    BLM, White River Field Office
    220 East Market Street
    Meeker, Colorado 81641
    Attn: Brett Smithers

24. The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to migratory waterfowl, shorebirds, wading birds and raptors during completion and after completion activities have ceased. Methods may include netting or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion.

25. There will be no construction and/or drilling activities allowed on the PCU 296-18A and 296-18D locations from January 1 – April 30 to avoid unnecessary activity in mule deer severe winter range. WRFO will except/modify RMP-prescribed timing limitations for those projects (via sundry notice) where there is written documentation affirming mutual consent among CDOW, the project proponent, and BLM. Outside such agreements, WRFO will consider excepting/modifying prescribed timing limitations upon written request from CDOW on a project proponent's behalf.

26. A raptor survey will be required prior to construction of the PCU 296-18A location. All raptor surveys will be performed following methods and procedures described in the WRFO Diurnal Raptor Survey Protocol. The third-party contractor responsible for conducting raptor surveys associated with the proposed action will contact the WRFO and request the most current version of the WRFO Diurnal Raptor Survey Protocol prior to performing surveys. Survey results must be provided to BLM staff biologists prior to construction. Should an active nest be located the appropriate timing limitations would be applied depending on species (TL -01 and TL-04 and NSO-02 and NSO-03 WRRA/ROD).

27. All raptor nests (e.g., stick-built structures, nest cavities, eyries), regardless of their breeding or non-breeding season status, are to be reported to WRFO Natural Resource Specialist, Brett Smithers (see contact information below) via phone (970-878-3818) or by email (preferred; brett_smithers@blm.gov) within 24 hrs of the observation. Please provide the following when reporting nests: 1) the species observed using the nest; 2) UTM coordinates for the nest (recorded in NAD83, Zone 12); 3) date nest was first documented; 4) brief summary describing adult and/or juvenile behavior, number of nestlings observed, etc.; and, 5) relevant project information (e.g., project name and NEPA document number, if known).

29. If an occupied raptor nest is located during raptor surveys, standard timing limitation and No Surface Occupancy lease stipulations will be applied to each well on a case-by-case (i.e., site-specific) basis.

30. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

    - whether the materials appear eligible for the National Register of Historic Places
    - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
    - a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

    If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

30. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

31. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

    - whether the materials appear to be of noteworthy scientific interest
    - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

    If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

32. If it becomes necessary to excavate into the underlying rock formation for any reason a paleontological monitor shall be present before and during all such excavations.

33. Paint all permanent structures (onsite greater than 6 months) with Juniper Green from the Standard Environmental Color Chart, CC-001 (2008). Initial painting will occur with 6 months post completion and regularly maintained.

34. When working on lands administered by White River Field Office, notify Craig Interagency Dispatch (970-826-5037) in the event of any fire. The reporting party will inform the dispatch center of the location of the fire, size, status, smoke color, aspect, fuel type and contact information. The reporting party or a representative should remain nearby in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response. The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting, grinding, etc. will be suppressed by the applicant only if employee safety is not compromised and if the fire can be safely contained using hand tools and portable hand pumps. If chemical fire extinguishers are used the applicant must notify incoming fire resources of the extinguisher type and the location of use. Natural ignitions caused by lightning will be managed by federal fire personnel. If a natural ignition occurs within the approved project area, the fire may be initially contained by the applicant only if employee safety is not compromised. The use of heavy equipment for fire suppression is prohibited, unless

authorized by the Field Office Manager. Moreover, removal of slash and woody debris associated with the proposed action shall follow mitigations as written under Forest Management.

35. In accordance with the 1997 White River RMP/ROD page 2-22, all trees removed in the process of construction shall be purchased from the BLM. Trees or shrubs that must be removed for construction or ROW preparation shall be cut down to a stump height of 6 inches or less prior to other heavy equipment operation. Trees removed during construction that are not needed for reclamation purposes shall be cut in four foot lengths (down to 4 inches diameter) and placed in manageable stacks immediately adjacent to a public road to facilitate removal by the public or removed for company use. Woody materials required for reclamation shall be stockpiled along the margins of the authorized use area separate from the topsoil piles. Once the disturbance has been recontoured, reseeded and successful revegetation has been accepted by the BLM WRFO, the stockpiled woody material shall be scattered across the reclaimed area where the material originated. Redistribution of woody debris will not exceed 20% ground cover. Woody material will be distributed in such a way to avoid large concentrations of heavy fuels and to effectively deter vehicle use.

36. During dry and dusty conditions the applicant will use an approved dust suppressant to mitigate the fugitive dust that would reduce visibility on the access roads to the well pads. The current condition of the BLM roads is the standard and the applicant will regularly maintain the BLM roads utilized as access to meet or exceed their current condition to allow for safe public use.

37. The holder is responsible for obtaining and implementing appropriate permits from state and local governments.

COMPLIANCE/MONITORING: On-going compliance inspections and monitoring of drilling, production and post-production activities will be conducted by White River Field Office staff during construction of well pads, access roads, and pipelines. Specific mitigation developed in this Environmental Assessment will be followed. The operator will be notified of compliance related issues in writing, and depending on the nature of the issue(s), will be provided 30 days to resolve such issues.

NAME OF PREPARER: Brett Smithers (Project Leader)

NAME OF ENVIRONMENTAL COORDINATOR: Kristin Bowen

SIGNATURE OF AUTHORIZED OFFICIAL: _____
Field Manager

DATE SIGNED: 10/6/2010

ATTACHMENTS: Figure 1. Project area map.
Table 1. Proposed feature dimensions and acres disturbed summar

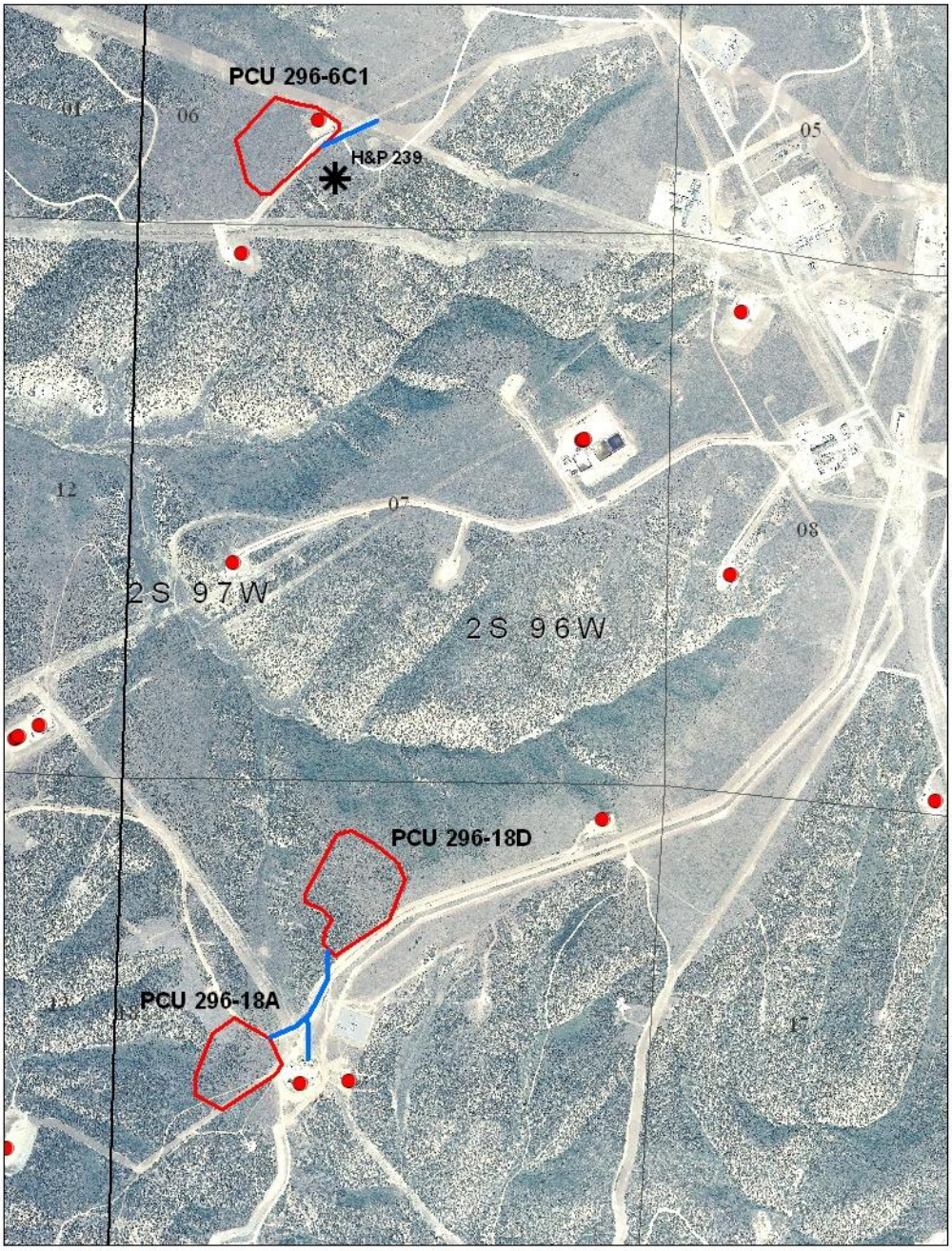

Figure 1. The figure above shows the geographic location of the proposed ExxonMobil well pad locations and the associated proposed pipeline corridors. Proposed well pad locations are symbolized as red polygons and proposed pipeline corridors are symbolized as blue lines. In addition, producing wells are symbolized as red dots and active natural gas drilling rigs are symbolized as black stars. Proposed access corridors will follow the proposed pipeline corridors.

Table 1. Feature dimensions, acres disturbed and acres reclaimed for the proposed action.

	Feature Dimensions				Acres Disturbed					Reclamation	
Well Pad ID	Pad Dimensions (ft)	Production Facility Pad (ft)	Access Corridor	Pipeline Corridor	Well Pad[1]	Production Facilities Pad	Access Corridor	Pipeline Corridor	**Total Acres Disturbed**	Acres Not Reclaimed	**Acres Reclaimed**
PCU 296-18A	450 x 500	115 x 250	400 x 40	300 x 50	9.7	0.66	0.37	0.30	**11.10**	2.60	**8.50**
PCU 296-18D	450 x 500	NA	520 x 40	1700 x 50	14.0	NA	0.50	2.00	**16.50**	2.90	**13.60**
PCU 296-6C1	450 x 500	80 x 200	570 x 40	600 x 50	10.4	0.37	0.52	0.70	**12.00**	3.80	**8.20**
Total					34.1	1.03	1.40	3.00	**39.60**	9.30	**30.30**

[1] Estimate includes total acres disturbed to construct the well pad.